



NDT Foundations – Theoretical Training Overview

Cycle Inspect's theoretical training is delivered virtually via LearnWorlds. Theoretical training can be completed at the desired pace of the trainee; however, completion of all theory modules is a pre-requisite to participation in practical training.

Introduction to Composites

- Damage tolerance and fatigue
- Manufacturing methods
- Composite structures
- PPE, repair facilities and equipment
- Introduction to composite repairs
- Definitions

Introduction to Ultrasound and Ultrasonic NDT

- Background
- Principles of acoustics
- Sound propagation
- Behaviour of sound waves an interface
- Materials used to generate ultrasonic energy
- Transducer construction
- Transducer sound beam characteristics
- The attenuation of sound
- Pulse echo testing
- System performance checks
- Ultrasonic test considerations
- Sizing of discontinuities
- Specific ultrasonic techniques

Theoretical Examination

At the completion of Cycle Inspect's theoretical ('eLearning') and practical skills training, trainees will undergo an online examination. This examination will utilise 'AI proctoring'.

With AI proctoring, or 'automated proctoring', trainees are monitored throughout their exam by artificial intelligence, which detects potential violations of academic dishonesty. AI features for online exams might include browser lockdown software, voice and sound detection, mobile device detection, video, and image capture; and more. If these tools detect cheating behaviour, trainees will be flagged, and the incident will be reported to Cycle Inspect.

If successful, NDT Foundations trainees will receive a certificate of completion and have the option to progress to practical skills training (after selecting one of Cycle Inspect's 'training and technology' packages) to receive a 'provisional qualification' and begin offering NDT as a service.

1:1 Consultation

As part of your NDT Foundations subscription, Cycle Inspect will organise a 1:1 private consultation with one of our certified NDT technicians which will involve live demonstrations of visual and ultrasound testing (UT) via a video conference platform. This is an opportunity for trainees to observe the inspection process in action and ask questions about the Cycle Inspect or the applications of NDT to your specific context (a shop, a mobile mechanic, repair, or paint workshop etc.)